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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.						
10/694,975	10/28/2003	Lang H. Nguyen	03089	4434						
<div>7590 Robert J. Follett, Esq. CABOT CORPORATION Law Department 157 Concord Road Billerica, MA 01821</div>										
<div>09/02/2009</div>										
<div>EXAMINER</div>										
<div>BERNSHTEYN, MICHAEL</div>										
<table border="1"><thead><tr><th>ART UNIT</th><th>PAPER NUMBER</th></tr></thead><tbody><tr><td colspan="2">1796</td></tr></tbody></table>					ART UNIT	PAPER NUMBER	1796			
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/694,975

**Applicant(s)**

NGUYEN, LANG H.

**Examiner**

MICHAEL M. BERNSTEYN

**Art Unit**

1796

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 June 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-6,10-12,18-22,24-35 and 37-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-6,10-12,18-22,24-35 and 37-41 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
- Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. This Office Action follows a response filed on June 2, 2009. Claims 1, 22, and 31 have been amended; no claims have been added or cancelled.
2. In view of the amendments and remarks, the rejection of claims 1, 3-6, 10-12 and 18-21 under 35 U.S.C. 112, 1<sup>st</sup> paragraph has been withdrawn.
3. Claims 1, 3-6, 10-12, 18-22, 24-35 and 37-41 are pending.

### ***Claim Rejections - 35 USC § 103***

4. The text of this section of Title 35 U.S.C. not included in this action can be found in a prior Office Action.
5. Claims 1, 3-6, 10-12, 18-22, 24-35 and 37-41 are rejected under 35 U.S.C. 103(a) as being unpatentable obvious over Martin et al. (U. S. Patent Application Publication 2003/0191231, now U. S. Patent 7,022,759), for the rationale recited in paragraph 8 of Office Action dated on December 3, 2008, and comments below.

### ***Response to Arguments***

6. Applicant's arguments filed on June 2, 2009 have been fully considered but they are not persuasive.
7. It appears that the focal Applicants argument resides in the contention that while Martin et al. teaches a crosslinkable polyester oligomer(s) that 'Preferably contains a sufficient concentration of bound hydrophilic water-dispersing groups" such as "ionic water-dispersing groups", preferably, a carboxylic acid group (see paragraphs [0062]-

[0064] and [0078]), and that this material "may be completely water soluble" or "only have partial solubility in water" (see paragraph [0061]), there is no disclosure, teaching or suggestion of the use of this oligomer(s) with a polyalkylene oxide that is water insoluble (page 10, 1<sup>st</sup> paragraph).

8. It is noted that with regard to the limitations of claims 1 and 3-6, Martin discloses that surfactants and or high shear can be utilized in order to assist in the dispersion of the polyester oligomer(s) in water (even if the oligomer(s) is self-dispersible). Suitable surfactants include but are not limited to conventional anionic, cationic and/or non-ionic. Non-ionic surfactants include polyglycol ether compounds and polyethylene oxide compounds (page 7, [0085]). With regard to the limitations of claims 10-12, Martin discloses NeoCryl BT-24 (acrylic emulsion polymer) (page 15, [0197]), which is exemplified in the specification (Example 1, page 13).

Martin discloses that crosslinking polyester oligomers E2, E4 and E7 were respectively 100%, 7.9% and 32.5% water soluble as measured by the centrifuge test (page 15, [0211]).

Therefore, all the limitations are met by Martin's reference.

9. Regarding the amount of external surfactant Applicants contend that Martin et al. teaches that the surfactant is preferably used in an amount of 0-15% by weight based on the weight of the crosslinkable polyester oligomer(s) (paragraph [0085]). By comparison, the amount of the water insoluble polyalkylene oxide recited in present claim 1 is 5-20% based on the total weight of the dispersant composition. Thus the amount of the external surfactant taught by Martin et al. is very different and well

outside the range of the amount of component (i) recited in the present claims (col. 11, 1<sup>st</sup> and 2<sup>nd</sup> paragraphs.

10. It is noted that the amount of the surfactant based on the total weight of the dispersant composition (paragraph [0211]) is within the claimed range.

Furthermore, it is noted that "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955) (Claimed process which was performed at a temperature between 40°C and 80°C and an acid concentration between 25% and 70% was held to be prima facie obvious over a reference process which differed from the claims only in that the reference process was performed at a temperature of 100°C and an acid concentration of 10%).

11. In response to Applicants arguments that there is no disclosure, teaching, or suggestion anywhere in Belmont of the use of a dispersant composition comprising both a water insoluble polyalkylene oxide and a water soluble polymer comprising at least one salt of a carboxylic acid group (page 13, 2<sup>nd</sup> paragraph), it is noted that Belmont's reference was used only like the second reference, and it should not contain all the limitations of instant claim 1.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

12. In response to Applicants arguments that Mazanek describes combination of dispersants that in some embodiments, include a water-soluble polymer (component A) and a non-ionic alkylene oxide adduct (component B), there is no disclosure, teaching, or suggestion anywhere in this reference that the non-ionic alkylene oxide adduct can or should be water insoluble, and the only discussion in Mazanek et al. that relates to how to choose the desired component B is based on viscosity measurements (col. 4, lines 50-52), which would be considered to be for soluble components (page 14, 3<sup>rd</sup> paragraph), it is well settled that "an applied reference may be relied upon for all that it would have reasonably suggested to one of ordinary skill in the art, including not only preferred embodiment, but less preferred and even non preferred". *Merck & Co. v. Biocraft Laboratories*, 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), cert. denied, 493 U.S. 975 (1989).

13. In response to Applicants arguments that Mazanek et al. teaches that the amount of component A (i.e., the water-soluble polymer) is between 40-95% by weight in the composition while the amount of the component (ii) recited in claim 1 is between about 3 and 25% based on the total weight of the dispersant composition (page 15, 1<sup>st</sup> paragraph), it is noted that as it was already mentioned in previous Office Action dated on December 3, 2008, that "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955) (Claimed process which was performed at a temperature between 40°C and 80°C and an acid concentration between 25% and 70% was held to be prima facie obvious over a

reference process which differed from the claims only in that the reference process was performed at a temperature of 100°C and an acid concentration of 10%). Furthermore, the amount of component (ii) is a result effective variable, and therefore, it is within the skill of those skilled in the art to find the optimum value of a result effective variable, as per *In re Boesch and Slaney* 205 USPQ 215 (CCPA 1980)

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL M. BERNSTEYN whose telephone number is (571)272-2411. The examiner can normally be reached on M-Th 8-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on 571-272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael M. Bernshteyn/  
Examiner, Art Unit 1796

/M. M. B./  
Examiner, Art Unit 1796

/David Wu/

Supervisory Patent Examiner, Art Unit 1796